This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Withdrawn) A catheter comprising:

a flexible body comprising a proximal end and a distal end;

a rigid housing rotatably coupled to the distal end of the flexible body, the housing having a window; and

a tissue debulking assembly disposed at least partially within the rigid housing, the tissue debulking assembly being movable from a first position to a second position, the debulking assembly being positioned within the window in the first position and extending out of the window in the second position, the debulking assembly changing an angular orientation of the rigid housing relative to the flexible body when moving from the first position to the second position.

2. (Withdrawn) The catheter of claim 1 wherein the tissue debulking assembly comprises a rotatable cutter.

3. (Withdrawn) The catheter of claim 2 wherein the housing and flexible body define a channel having a longitudinal axis, the catheter further comprising a drive shaft positioned within the channel, wherein the drive shaft is attachable to a driver for rotating the cutter.

4. (Withdrawn) The catheter of claim 3 wherein the rigid housing deflects in a direction opposite of the window about an axis that is substantially orthogonal to the longitudinal axis of the flexible body so as to position the cutter adjacent a target tissue.

5. (Withdrawn) The catheter of claim 1 wherein the rigid housing is coupled to the flexible body with a joint, wherein movement of the tissue debulking assembly from the first position to the second position actuates deflection of the rigid housing about the joint.

6. (Withdrawn) The catheter of claim 5 further comprising a ramp positioned on the rigid housing opposite of the window, wherein proximal movement of the tissue debulking assembly over the ramp deflects the rigid housing and exposes the tissue debulking assembly out of the window.

Claims 7-8 Canceled

9. (Withdrawn) The catheter of claim 1 wherein the tissue debulking assembly changes the angular orientation of a longitudinal axis of the debulking assembly relative to the longitudinal axis of the rigid housing when moving from the first position to the second position.

10. (Withdrawn) The catheter of claim 1 wherein the tissue debulking assembly in the second position moves a longitudinal axis of the rigid housing to an offset parallel position relative to the longitudinal axis of the tissue debulking assembly.

11. (Withdrawn) The catheter of claim 1 further comprising a flexible distal tip coupled to the rigid housing, wherein at least one of the distal tip and rigid housing comprise a collection chamber.

12. (Withdrawn) The catheter of claim 11 wherein the flexible distal tip and flexible body comprise lumens for receiving a guidewire.

13. (Withdrawn) The catheter of claim 1 wherein the tissue debulking assembly comprises a RF electrode, a laser, or an ultrasound emitter.

Claims 14-31 Canceled

32. (Withdrawn) A catheter comprising:

a flexible body comprising a proximal end and a distal end;

a rigid housing rotatably coupled to the distal end of the flexible body, the housing comprising a cutting window; and

a debulking assembly movably disposed within the rigid housing, wherein movement of the debulking assembly from a first position to a second position rotates the rigid housing relative to the flexible body.

33. (Withdrawn) The catheter of claim 32 further comprising a ramp in the rigid housing, wherein movement of the debulking assembly over the ramp moves the debulking assembly out of the cutting window beyond an outer diameter of the rigid housing.

34. (Withdrawn) The catheter of claim 32 wherein the first position is distal to the second position, wherein the debulking assembly in the first distal position closes the cutting window.

35. (Withdrawn) The catheter of claim 32 wherein the housing and flexible body define a channel, wherein the debulking assembly is a rotatable cutter, the catheter further comprising a drive shaft positioned within the channel and attachable to a drive unit for rotating the cutter.

36. (Withdrawn) The catheter of claim 35 wherein the housing defines a longitudinal axis, wherein the cutter and drive shaft are rotatable about the longitudinal axis.

37. (Withdrawn) The catheter of claim 36 wherein the cutter pivots about an axis that is orthogonal to the longitudinal axis when the cutter moves out of the cutting window.

38. (Withdrawn) The catheter of claim 37 wherein the rigid housing comprises a flexible joint, wherein moving the cutter rotates the housing about the flexible joint.

39. (Previously Amended) A method of removing material from a body lumen, the method comprising:

delivering a catheter comprising a tissue debulking device to a target site in the body lumen;

deflecting a distal portion of the catheter relative to a proximal portion of the catheter to expose the tissue debulking device through a cutting window; and

debulking the body lumen by rotating the tissue debulking device about a first axis with the tissue debulking device being exposed through the cutting window in the catheter, the debulking step being carried out by advancing the catheter in the body lumen to move the rotating tissue debulking device through material in the body lumen.

40. Canceled

41. (Previously presented) The method of claim 39 wherein exposing comprises sliding the tissue debulking device against a cam surface.

42. (Previously presented) The method of claim 39 wherein the first axis is a longitudinal axis of the catheter.

43. Canceled

44. (Original) The method of claim 39 further comprising packing severed material into a collection chamber.

45. (Original) The method of claim 39 wherein deflecting comprises urging the tissue debulking device against the material in the body lumen.

46. (Original) The method of claim 39 wherein delivering comprises attaching a guidewire to a monorail delivery assembly on the catheter.

47. (Original) The method of claim 39 wherein the target site is a stent.

48. (Original) The method of claim 39 wherein deflecting is carried out by moving the tissue debulking device from a first position to a second position.

Claims 49-61 Canceled

62. (Previously amended) A method of debulking a body lumen, the method comprising:

providing a catheter having a rotating cutter, a collection chamber, and a cutting window, the collection chamber being distal to the cutting window, the rotating cutter being movable between a stored position and an exposed position, at least part of the rotating cutter becoming exposed through the cutting window when moving to the exposed position, the catheter also having means for rotating the cutter;

exposing the cutter by moving the cutter to the exposed position; and

advancing the catheter in a distal direction to move the rotating cutter through occlusive material in the body lumen while the rotating means rotates the cutter, the rotating cutter remaining in the exposed position so that the cutter and the window maintain their orientation with respect to one another when advancing the catheter through the occlusive material, the occlusive material cut by the rotating cutter being directed through the cutting window and into the collection chamber distal to the rotating cutter as the catheter is advanced in the distal direction through the occlusive material.

Claims 63-68 Canceled

69. (Currently amended) A method of removing material from a vascular location, comprising the steps of:

providing a debulking catheter having a body, an opening leading to a

collection chamber, and a cutter, the collection chamber being distal to the opening, the cutter being movable between a stored position and an exposed position, the cutter becoming at least partially exposed when moving from the stored position to the exposed position, the catheter also having means for rotating the cutter;

introducing the debulking catheter into a patient's vascular system with the cutter in the stored position, the debulking catheter being introduced to a vascular location where material is to be removed;

exposing the cutter by moving the cutter to the exposed position;

rotating the cutter with the rotating means; and

advancing the debulking catheter in a distal direction after the exposing step and during the rotating step, wherein the rotating cutter and the opening advance together so that material cut by the rotating cutter is directed through the opening and into the collection chamber distal to the rotating cutter as the catheter is advanced, the cutter and the window maintaining their orientation with respect to one another when advancing the catheter through the occlusive material.

70. (Previously presented) The method of claim 69, wherein:

the advancing step is carried out with the rotating cutter remaining in the exposed position so that the cutter and opening move together while cutting the material from the vascular location.

71. (Previously presented) The method of claim 69, wherein:

the providing step is carried out with the opening being a side opening on the catheter; and

the moving step being carried out with part of the cutter becoming exposed through the side opening when moving to the exposed position.

72. (Previously presented) The method of claim 69, further comprising the step of:

urging the opening toward the area where material is to be removed;

the advancing step being carried out while urging the opening toward the area where material is to be removed.

73. Canceled

74. (Previously presented) The method of claim 62, wherein:

the providing step is carried out with the opening being a side opening on the catheter; and

the moving step being carried out with part of the cutter becoming exposed through the side opening when moving to the exposed position.

75. (Previously presented) The method of claim 62, wherein:

the providing step is carried out with the rotating means including a drive shaft which couples the rotating cutter to a driver.

76. (Previously presented) The method of claim 69, wherein:

the providing step is carried out with the rotating means including a drive shaft which couples the rotating cutter to a driver.